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## Occupational Employment and Wages in Philadelphia-Camden-Wilmington – May 2017

Workers in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area had an average (mean) hourly wage of \$26.41 in May 2017, 9 percent above the nationwide average of \$24.34, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that after testing for statistical significance, 15 of the 22 major occupational groups had wages in the local area that were significantly higher from their respective national averages, including management, construction and extraction, and sales and related.

When compared to the nationwide distribution, local employment shares were significantly higher in 10 of the 22 occupational groups, including office and administrative support, healthcare practitioners and technical, and business and financial operations. Conversely, 11 groups had employment shares significantly below their national representation; these groups included production, food preparation and serving related, and construction and extraction. (See [table A](#) and box note at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2017**

| Major occupational group                             | Percent of total employment |              |   | Mean hourly wage |              |                                   |    |
|--|-----------------------------|--------------|---|------------------|--------------|-----------------------------------|----|
|  | United States               | Philadelphia |   | United States    | Philadelphia | Percent difference <sup>(1)</sup> |    |
| Total, all occupations .....                         | 100                         | 100          |   | \$24.34          | \$26.41      | *                                 | 9  |
| Management .....                                     | 5.1                         | 4.7          | * | 57.65            | 66.81        | *                                 | 16 |
| Business and financial operations .....              | 5.2                         | 6.1          | * | 36.70            | 38.54        | *                                 | 5  |
| Computer and mathematical .....                      | 3.0                         | 3.5          | * | 43.18            | 43.54        |                                   | 1  |
| Architecture and engineering .....                   | 1.8                         | 1.6          | * | 41.44            | 42.51        | *                                 | 3  |
| Life, physical, and social science .....             | 0.8                         | 1.1          | * | 35.76            | 39.40        | *                                 | 10 |
| Community and social service .....                   | 1.5                         | 1.9          | * | 23.10            | 22.94        |                                   | -1 |
| Legal .....  | 0.8                         | 1.1          | * | 51.62            | 54.11        |                                   | 5  |
| Education, training, and library .....               | 6.1                         | 6.6          | * | 26.67            | 29.87        | *                                 | 12 |
| Arts, design, entertainment, sports, and media ..... | 1.4                         | 1.1          | * | 28.34            | 26.92        | *                                 | -5 |
| Healthcare practitioners and technical .....         | 6.0                         | 6.9          | * | 38.83            | 39.93        | *                                 | 3  |
| Healthcare support .....                             | 2.9                         | 3.5          | * | 15.05            | 15.34        | *                                 | 2  |
| Protective service .....                             | 2.4                         | 2.5          |   | 22.69            | 22.38        |                                   | -1 |
| Food preparation and serving related .....           | 9.3                         | 8.1          | * | 11.88            | 12.07        | *                                 | 2  |
| Building and grounds cleaning and maintenance .....  | 3.1                         | 2.9          | * | 13.91            | 14.96        | *                                 | 8  |
| Personal care and service .....                      | 3.6                         | 4.4          | * | 13.11            | 13.12        |                                   | 0  |
| Sales and related .....                              | 10.2                        | 9.8          | * | 19.56            | 22.16        | *                                 | 13 |
| Office and administrative support .....              | 15.4                        | 16.6         | * | 18.24            | 19.27        | *                                 | 6  |

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2017 - Continued**

| Major occupational group                    | Percent of total employment |              |   | Mean hourly wage |              |   |                                   |
|---|-----------------------------|--------------|---|------------------|--------------|---|-----------------------------------|
|   | United States               | Philadelphia |   | United States    | Philadelphia |   | Percent difference <sup>(1)</sup> |
| Farming, fishing, and forestry .....        | 0.3                         | 0.1          | * | 13.87            | 15.21        | * | 10                                |
| Construction and extraction .....           | 4.0                         | 3.1          | * | 24.01            | 27.95        | * | 16                                |
| Installation, maintenance, and repair ..... | 3.9                         | 3.5          | * | 23.02            | 24.59        | * | 7                                 |
| Production .....                            | 6.3                         | 4.2          | * | 18.30            | 19.91        | * | 9                                 |
| Transportation and material moving .....    | 7.0                         | 6.7          | * | 17.82            | 17.66        |   | -1                                |

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—architecture and engineering—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Philadelphia had 46,280 jobs in the architecture and engineering occupations, accounting for 1.6 percent of local area employment, significantly lower than the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$42.51, 3 percent above the national average of \$41.44.

With employment of 5,610 mechanical engineers was the largest detailed occupation within architecture and engineering, followed by civil engineers (4,710). Among the higher-paying jobs in this group were aerospace engineers with a mean hourly wage of \$54.32 and nuclear engineers with a wage of \$54.02. At the lower end of the wage scale were environmental engineering technicians (\$21.80) and surveying and mapping technicians (\$22.82). (Detailed occupational data for life, physical, and social science are presented in [table 1](#); for a complete listing of detailed occupations available go to [https://www.bls.gov/oes/current/oes\\_37980.htm](https://www.bls.gov/oes/current/oes_37980.htm).)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area as it does nationally. In the Philadelphia area, above-average concentrations of employment were found in several of the occupations within the architecture and engineering group. For instance, chemical engineers were employed at 2.2 times the national rate in Philadelphia, and aerospace engineers at 2.4 times the U.S. average. On the other hand, architectural and civil drafters had a location quotient of 1.1 in Philadelphia, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry; the New Jersey Department of Labor and Workforce Development; the Delaware Department of Labor; and the Maryland Department of Labor, Licensing, and Regulation.

### **Note on Occupational Employment Statistics Data**

With the release of the May 2017 estimates, the OES program has replaced 21 detailed occupations found in the 2010 Standard Occupational Classification (SOC) with 10 new aggregations of those occupations. In addition, selected 4- and 5-digit North American Industry Classification System (NAICS) industries previously published by OES will no longer be published separately. Some of the 4-digit NAICS industries that are no longer being published separately will instead be published as OES-specific industry aggregations. More information about the new occupational and industry aggregations is available at [www.bls.gov/oes/changes\\_2017.htm](http://www.bls.gov/oes/changes_2017.htm).

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

### **Technical Note**

The Occupational Employment Statistics (OES) survey is a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 650 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), metropolitan divisions, nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-, 4-, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2017 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2017, November 2016, May 2016, November 2015, May 2015, and November 2014. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 72 percent based on establishments and 68 percent based on weighted sampled employment. The unweighted sample employment of 82 million across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area included 17,682 establishments with a response rate of 72 percent. For more information about OES concepts and methodology, go to [www.bls.gov/oes/current/oes\\_tec.htm](http://www.bls.gov/oes/current/oes_tec.htm).

The May 2017 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2017 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc/](http://www.bls.gov/soc/) and information about the 2017 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### **Metropolitan area definitions**

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area** includes Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, Gloucester, and Salem Counties in New Jersey; New Castle County in Delaware; and Cecil County in Maryland.

### **Additional information**

OES data are available on our regional web page at [www.bls.gov/regions/mid-atlantic](http://www.bls.gov/regions/mid-atlantic). Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Philadelphia-Camden-Wilmington Metropolitan Statistical Area, May 2017**

| Occupation <sup>(1)</sup>  | Employment <sup>(2)</sup> |                                  | Mean wage |                       |
|--|---------------------------|----------------------------------|-----------|-----------------------|
|  | Level                     | Location quotient <sup>(3)</sup> | Hourly    | Annual <sup>(4)</sup> |
| Architecture and engineering occupations .....                                   | 46,280                    | 0.9                              | \$42.51   | \$88,430              |
| Architects, except landscape and naval .....                                     | 2,700                     | 1.3                              | 37.05     | 77,070                |
| Landscape architects .....   | 460                       | 1.2                              | 33.40     | 69,470                |
| Cartographers and photogrammetrists .....  | 50                        | 0.2                              | 34.72     | 72,220                |
| Surveyors .....  | 620                       | 0.7                              | 31.23     | 64,970                |
| Aerospace engineers .....  | 3,050                     | 2.4                              | 54.32     | 112,980               |
| Biomedical engineers .....   | 430                       | 1.1                              | 43.29     | 90,040                |
| Chemical engineers .....   | 1,460                     | 2.2                              | 53.37     | 111,010               |
| Civil engineers .....  | 4,710                     | 0.8                              | 44.85     | 93,290                |
| Computer hardware engineers .....  | 620                       | 0.5                              | 49.49     | 102,930               |
| Electrical engineers .....   | 3,700                     | 1.0                              | 49.49     | 102,930               |
| Electronics engineers, except computer .....                                     | 2,140                     | 0.8                              | 46.84     | 97,440                |
| Environmental engineers .....  | 1,340                     | 1.3                              | 43.79     | 91,090                |
| Health and safety engineers, except mining safety engineers and inspectors ..... | 580                       | 1.1                              | 51.18     | 106,460               |
| Industrial engineers .....   | 4,450                     | 0.9                              | 46.46     | 96,650                |
| Marine engineers and naval architects .....                                      | 90                        | 0.4                              | 41.97     | 87,300                |
| Materials engineers .....  | 400                       | 0.7                              | 48.11     | 100,060               |
| Mechanical engineers .....   | 5,610                     | 1.0                              | 46.01     | 95,700                |
| Nuclear engineers .....  | 430                       | 1.3                              | 54.02     | 112,360               |
| Petroleum engineers .....  | 190                       | 0.3                              | 62.61     | 130,230               |
| Engineers, all other .....   | 2,800                     | 1.1                              | 49.21     | 102,360               |
| Architectural and civil drafters .....   | 2,110                     | 1.1                              | 26.53     | 55,170                |
| Electrical and electronics drafters .....  | 470                       | 0.9                              | 31.04     | 64,560                |
| Mechanical drafters .....  | 1,120                     | 1.0                              | 30.16     | 62,720                |
| Drafters, all other .....  | 110                       | 0.4                              | 25.49     | 53,020                |
| Aerospace engineering and operations technicians .....                           | 50                        | 0.2                              | 36.76     | 76,460                |
| Civil engineering technicians .....  | 970                       | 0.7                              | 27.35     | 56,890                |
| Electrical and electronics engineering technicians .....                         | 1,770                     | 0.7                              | 28.91     | 60,140                |
| Electro-mechanical technicians .....   | 90                        | 0.4                              | 25.23     | 52,490                |
| Environmental engineering technicians .....                                      | 510                       | 1.5                              | 21.80     | 45,340                |
| Industrial engineering technicians .....   | 910                       | 0.7                              | 30.01     | 62,430                |
| Mechanical engineering technicians .....   | 750                       | 0.9                              | 26.41     | 54,940                |
| Engineering technicians, except drafters, all other .....                        | 1,330                     | 0.9                              | 30.60     | 63,650                |
| Surveying and mapping technicians .....  | 250                       | 0.2                              | 22.82     | 47,470                |

**Footnotes:**

(1) For a complete listing of all detailed occupations in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_37980.htm](http://www.bls.gov/oes/current/oes_37980.htm).

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.